CLAIMS

[c1] 1. An apparatus for supporting a microelectronic substrate, comprising:

a support member having a support surface configured to carry a microelectronic substrate;

a first connection structure carried by the support member and configured to remain decoupled from a microelectronic substrate when the support member carries the microelectronic substrate, the first connection structure having a first bond site configured to receive a flowable conductive material, the first connection structure further having a first number of first elongated members connected to and extending outwardly from the first bond site, wherein none of the first elongated members is configured to be electrically connected to the microelectronic substrate; and

a second connection structure carried by the support member, the second connection structure having a second bond site configured to receive a flowable conductive material, the second connection structure being configured to be coupled to the microelectronic substrate when the support member carries the microelectronic substrate, the second connection structure further having a second number of second elongated members extending outwardly from the second bond site, the second number being the same as the first number.

[c2] 2. The apparatus of claim 1 wherein each of the first elongated members is configured to receive at least a portion of the flowable conductive material and wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material.

[c3] 3. The apparatus of claim 1, further comprising a layer disposed on the first and second elongated members and attached to the support member, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein a covered portion of each first and second elongated members extends between the layer and the support member, and an exposed portion of each elongated member is exposed through one of the first and second apertures, further wherein each exposed portion has approximately the same length.

[c4] 4. The apparatus of claim 1, further comprising a layer disposed on the first and second elongated members and attached to the support member, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein the layer covers junctions between the first bond site and the first elongated members, and covers junctions between the second bond site and the second elongated members.

[c5] 5. The apparatus of claim 1 wherein the first bond site includes a solder pad having a diameter of about 330 microns and wherein at least one of the first elongated members has a length of about 250 microns, further wherein the apparatus further comprises a solder mask disposed over the first and second elongated members and attached to the support member, the solder mask having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein a covered portion of the at least one first elongated member extends beneath the solder mask for a distance of about 200 microns.

[c6] 6. The apparatus of claim 1 wherein the second connection structure has a third bond site configured to be wire bonded to the microelectronic substrate when the microelectronic substrate is carried by the support member,

and wherein at least one of the second elongated members extends between the second and third bond sites.

[c7] 7. The apparatus of claim 1 wherein the first and second elongated members are configured to be wetted by the flowable conductive material when the flowable conductive material is disposed on the first bond site and placed in a flowable state.

[c8] 8. The apparatus of claim 1 wherein the first conductive structure includes two first elongated members extending away from opposite sides of the first bond site.

[c9] 9. The apparatus of claim 1, further comprising a layer disposed on the first and second elongated members and attached to the support member, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site.

[c10] 10. The apparatus of claim 1 wherein the first connection structure includes at least one electrically conductive metallic material.

[c11] 11. The apparatus of claim 1 wherein one of the first elongated members is shorter than another of the first elongated members.

[c12] 12. The apparatus of claim 1 wherein at least one of the elongated members is temporarily coupled to a plating bus to provide electrical current to the first connection structure during formation of the support member.

[c13] 13. The apparatus of claim 1 wherein the first bond site includes a solder ball pad, and wherein the apparatus further comprises a solder ball disposed on the solder ball pad.

[c14] 14. The apparatus of claim 1, further comprising:

a first solder ball disposed on the first bond site and having a first size and shape;

a second solder ball disposed on the second bond site and having a second size at least approximately the same as the first size, and a second shape at least approximately the same as the first shape; and

a microelectronic substrate carried by the support member, the microelectronic substrate being electrically coupled to the second connection structure and being electrically isolated from the first connection structure.

[c15] 15. The apparatus of claim 1 wherein the first connection structure and the second connection structure each have two elongated members.

[c16] 16. The apparatus of claim 1 wherein the first connection structure and the second connection structure each have three elongated members.

[c17] 17. The apparatus of claim 1 wherein at least one of the first elongated members has a first end connected to the first bond site and a second end spaced apart from the first bond site, and wherein the at least one first elongated member includes an anchor toward the second end to secure the first elongated member to the support member.

[c18] 18. The apparatus of claim 1 wherein each of the first and second elongated members has an axis along which the member is elongated and wherein each member has a width transverse to the axis, further wherein the widths of all the elongated members on the support member are approximately equal.

[c19] 19. The apparatus of claim 1 wherein the support member has a first surface that includes the support surface, the support member further having a second surface facing opposite from the first surface, the first and second connection structures being disposed on the second surface, and wherein the support member includes a slot extending between the first and second surfaces, the slot being positioned to receive wires extending between the second connection structure and the microelectronic substrate when the support member carries the microelectronic substrate.

[c20] 20. The apparatus of claim 1, further comprising:

a first solder ball disposed on the first bond site and projecting away from the first bond site by a first distance; and

a second solder ball disposed on the second bond site and projecting away from the second bond site by a second distance at least approximately the same as the first distance.

[c21] 21. An apparatus for supporting a microelectronic substrate, comprising:

a support member having a support surface configured to carry a microelectronic substrate;

a first bond site carried by the support member and configured to remain decoupled from a microelectronic substrate when the support member carries the microelectronic substrate;

first elongated members connected to and extending outwardly from the first bond site;

a first portion of a flowable conductive material disposed on the first bond site, the first portion of the flowable conductive material projecting from the first bond site in a direction generally normal to the first bond site by a first distance;

a second bond site carried by the support member and configured to be electrically coupled to the microelectronic substrate when the support member carries the microelectronic substrate;

second elongated members extending outwardly from the second bond site; and

a second portion of a flowable conductive material disposed on the second bond site, the second portion of the flowable conductive material projecting from the second bond site in a direction generally normal to the second bond site by a second distance at least approximately equal to the first distance.

[c22] 22. The apparatus of claim 21 wherein the first bond site has a total of a first number of first elongated members and the second bond site has a total of a second number of second elongated members, and wherein the first number is the same as the second number.

[c23] 23. The apparatus of claim 21, further comprising a third bond site configured to be wire bonded to the microelectronic substrate when the microelectronic substrate is carried by the support member, and wherein at least one of the second elongated members extends between the second and third bond sites.

[c24] 24. The apparatus of claim 21 wherein at least part of the first portion of the flowable conductive material extends along the first elongated members, and wherein at least part of the second portion of the flowable conductive material extends along the second elongated members.

[c25] 25. The apparatus of claim 21 wherein the first elongated members include two first elongated members extending away from opposite sides of the first bond site.

[c26] 26. The apparatus of claim 21, further comprising a layer disposed on the first and second elongated members and attached to the support member, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site.

[c27] 27. The apparatus of claim 21, further comprising a layer disposed on the first and second elongated members and attached to the support member, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein a covered portion of each first and second elongated member extends between the layer and the support member, and an exposed portion of each elongated member is exposed through one of the first and second apertures, further wherein each exposed portion has approximately the same length.

[c28] 28. The apparatus of claim 21 wherein the first elongated members include at least one electrically conductive metallic material.

[c29] 29. The apparatus of claim 21 wherein the first bond site includes a solder ball pad, and wherein the flowable conductive material includes a solder ball disposed on the solder ball pad.

[c30] 30. The apparatus of claim 21, further comprising:

a first solder ball disposed on the first bond site;

a second solder ball disposed on the second bond site; and

a microelectronic substrate carried by the support member, the microelectronic substrate being electrically coupled to the second bond site and being electrically isolated from the first bond site.

[c31] 31. The apparatus of claim 21 wherein at least one of the first elongated members has a first end connected to the first bond site and a second end spaced

apart from the first bond site, and wherein the first elongated member includes an anchor toward the second end to secure the first elongated member to the support member.

[c32] 32. An apparatus for supporting a microelectronic substrate, comprising:

a support member having a support surface configured to carry a microelectronic substrate;

a first connection structure carried by the support member and having a first bond site configured to receive a flowable conductive material and remain electrically isolated from a microelectronic substrate when the microelectronic substrate is carried by the support member, the first connection structure further having at least two first elongated members connected to and extending outwardly from the first bond site, wherein each of the first elongated members is configured to receive at least a portion of the flowable conductive material; and

a plurality of second connection structures carried by the support member, each second connection structure having a second bond site configured to receive a flowable conductive material, each second connection structure being configured to be electrically coupled to the microelectronic substrate when the support member carries the microelectronic substrate, each second connection structure still further having at least two second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material from the second bond site, further wherein none of the second connection structures are coupled to any first connection structures of the support member.

[c33] 33. The apparatus of claim 32 wherein all of the first and second connection structures of the support member have the same number of elongated members.

[c34] 34. The apparatus of claim 32 wherein each second connection structure has a third bond site configured to be wire bonded to the microelectronic substrate when the microelectronic substrate is carried by the support member, and wherein and at least one of the second elongated members of each second connection structure extends between the second and third bond sites of that second connection structure.

[c35] 35. The apparatus of claim 32 wherein the first and second elongated members are configured to be wetted by the flowable conductive material when the flowable conductive material is disposed on the first bond site and placed in a flowable state.

[c36] 36. The apparatus of claim 32 wherein the first conductive structure includes two first elongated members extending away from opposite sides of the first bond site.

[c37] 37. The apparatus of claim 32, further comprising a layer disposed on the first and second elongated members and attached to the support member, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site.

[c38] 38. The apparatus of claim 32, further comprising a layer disposed on the first and second elongated members and attached to the support member, the layer having a first aperture aligned with the first bond site and a second aperture aligned with the second bond site, and wherein a covered portion of each first and second elongated member extends between the layer and the support member,

and an exposed portion of each elongated member is exposed through one of the first and second apertures, further wherein each exposed portion has approximately the same length.

[c39] 39. The apparatus of claim 32 wherein the first connection structure includes at least one electrically conductive metallic material.

[c40] 40. The apparatus of claim 32 wherein the first bond site includes a solder ball pad, and wherein the apparatus further comprises a solder ball disposed on the solder ball pad.

[c41] 41. The apparatus of claim 32, further comprising:

a first solder ball disposed on the first bond site;

a second solder ball disposed on the second bond site of each second connection structure; and

a microelectronic substrate carried by the support member, the microelectronic substrate being electrically coupled to the second connection structures and being electrically isolated from the first connection structure.

[c42] 42. The apparatus of claim 32 wherein at least one of the first elongated members has a first end connected to the first bond site and a second end spaced apart from the first bond site, and wherein the first elongated member includes an anchor toward the second end to secure the first elongated member to the support member.

[c43] 43. The apparatus of claim 32, further comprising:

a first solder ball disposed on the first bond site and projecting away from the first bond site by a first distance; and

a second solder ball disposed on the second bond site and projecting away from the second bond site by a second distance at least approximately the same as the first distance.

[c44] 44. A microelectronic assembly, comprising:

a microelectronic substrate;

a support member carrying the microelectronic substrate; and

a connection structure carried by the support member, the connection structure having a bond site configured to receive a flowable conductive material, the connection structure further having at least two elongated members connected to and extending outwardly from the bond site with none of the elongated members being electrically coupled to the microelectronic substrate.

[c45] 45. The assembly of claim 44 wherein each elongated member is configured to receive at least a portion of the flowable conductive material from the bond site.

[c46] 46. The assembly of claim 44 wherein the connection structure is a first connection structure and the elongated members are first elongated members configured to receive at least a portion of a flowable conductive material from the first bond site, and wherein the apparatus further comprises a second connection structure carried by the support member, the second connection structure having a second bond site configured to receive a flowable conductive material, the second connection structure being electrically coupled to the microelectronic substrate and having second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material from the second bond site.

[c47] 47. The assembly of claim 44 wherein the connection structure is a first connection structure and the elongated members are first elongated members, and wherein the apparatus further comprises a second connection structure carried by the support member, the second connection structure having a second bond site configured to receive a flowable conductive material, the second connection structure having a third bond site electrically coupled to the microelectronic substrate, the second connection structure further having second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material from the second bond site, and wherein at least one of the second elongated members extends between the second and third bond sites.

[c48] 48. The assembly of claim 44 wherein the elongated members are configured to be wetted by the flowable conductive material when the flowable conductive material is in a flowable state.

[c49] 49. The assembly of claim 44 wherein the conductive structure includes exactly two elongated members extending away from opposite sides of the bond site.

[c50] 50. The assembly of claim 44, further comprising a layer disposed on the elongated members and attached to the support member, the layer having an aperture aligned with the bond site.

[c51] 51. The assembly of claim 44, further comprising a layer disposed on the elongated members and attached to the support member, the layer having an aperture aligned with the bond site, and wherein a covered portion of each elongated member extends between the layer and the support member, and an

exposed portion of each elongated member is exposed through the aperture, further wherein each exposed portion has approximately the same length.

[c52] 52. The assembly of claim 44 wherein the connection structure includes at least one electrically conductive metallic material.

[c53] 53. The assembly of claim 44 wherein the bond site includes a solder ball pad, and wherein the apparatus further comprises a solder ball disposed on the solder ball pad.

[c54] 54. The assembly of claim 44 wherein at least one of the elongated members has a first end connected to the bond site and a second end spaced apart from the bond site, and wherein the elongated member includes an anchor toward the second end to secure the elongated member to the support member.

[c55] 55. The apparatus of claim 44 wherein the support member has a first surface that includes the support surface, the support member further having a second surface facing opposite from the first surface, the connection structure being disposed on the second surface, and wherein the support member includes a slot extending between the first and second surfaces, and wherein the apparatus further comprises wires extending through the slot between the second connection structure and the microelectronic substrate.

[c56] 56. The apparatus of claim 44 wherein the connection structure is a first connection structure and the elongated members are first elongated members configured to receive at least a portion of a flowable material from the first bond site, and wherein the apparatus further comprises a second connection structure carried by the support member, the second connection structure having a second bond site configured to receive a flowable conductive material, the second connection structure being electrically coupled to the microelectronic substrate

and having second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material from the second bond site, and wherein the apparatus further comprises:

a first solder ball disposed on the first bond site and projecting away from the first bond site by a first distance; and

a second solder ball disposed on the second bond site and projecting away from the second bond site by a second distance at least approximately the same as the first distance.

[c57] 57. A microelectronic assembly, comprising:

a microelectronic substrate;

a support member carrying the microelectronic substrate;

an inactive connection structure carried by the support member, the inactive connection structure having a first bond pad in contact with a first solder ball, the inactive connection structure further having at least two first elongated conductive members, each of which extends outwardly from the first bond pad and neither of which is electrically coupled to the microelectronic substrate, the first conductive members each contacting at least a portion of the first solder ball;

an active connection structure carried by the support member, the active connection structure having a second bond pad in contact with a second solder ball, the active connection structure further having a third bond pad configured to receive a wire bond, the active connection structure still further having at least two second elongated conductive members each extending outwardly from the second bond pad, wherein at least one of the second conductive members extends between the second bond pad and the third bond pad, and wherein each of the second conductive members contacts at least a portion of the second solder ball;

a wire bond connected between the microelectronic substrate and the third bond pad; and

a solder mask disposed on the active and inactive connection structures, the solder mask having a first aperture aligned with the first bond pad and a second aperture aligned with the second bond pad.

[c58] 58. The assembly of claim 57 wherein the first bond pad has a diameter of about 330 microns and wherein each of the first conductive members has a length of about 250 microns or more, further wherein a covered portion of each of the first conductive members extends beneath the solder mask for a distance of about 200 microns.

[c59] 59. The assembly of claim 57 wherein the inactive connection structure and the active connection structure each have the same number of conductive members.

[c60] 60. The assembly of claim 57 wherein at least one of the first conductive members has a first end connected to the first bond site and a second end spaced apart from the first bond site, and wherein the first conductive member includes an anchor toward the second end to secure the first conductive member to the support member.

[c61] 61. The assembly of claim 57, further comprising:

a first solder ball disposed on the first bond site and projecting away from the first bond site by a first distance; and

a second solder ball disposed on the second bond site and projecting away from the second bond site by a second distance at least approximately the same as the first distance.

[c62] 62. An electronic device, comprising:

a housing;

a microelectronic substrate positioned within the housing;

a support member carrying the microelectronic substrate in the housing; and

a connection structure carried by the support member, the connection structure having a bond site configured to receive a flowable conductive material, the connection structure further having at least two elongated members, each of which is connected to and extends outwardly from the bond site, each elongated member being configured to receive at least a portion of the flowable conductive material from the bond site, and neither of which is electrically connected to the microelectronic substrate.

[c63] 63. The device of claim 62 wherein each elongated member is configured to receive at least a portion of the flowable conductive material from the bond site.

[c64] 64. The device of claim 62 wherein the connection structure is a first connection structure and the elongated members are first elongated members configured to receive at least a portion of the flowable conductive material from the first bond site, and wherein the apparatus further comprises a second connection structure carried by the support member, the second connection structure having a second bond site configured to receive a flowable conductive material, the second connection structure having a third bond site electrically coupled to the microelectronic substrate, the second connection structure further having second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material, and wherein and at least one of the second elongated members extends between the second and third bond sites.

[c65] 65. The device of claim 62 wherein the elongated members are configured to be wetted by the flowable conductive material when the flowable conductive material is in a flowable state.

[c66] 66. The device of claim 62 wherein the conductive structure includes two elongated members extending away from opposite sides of the bond site.

[c67] 67. The device of claim 62, further comprising a layer disposed on the elongated members and attached to the support member, the layer having an aperture aligned with the bond site.

[c68] 68. The device of claim 62, further comprising a layer disposed on the elongated members and attached to the support member, the layer having an aperture aligned with the bond site, and wherein a covered portion of each elongated member extends between the layer and the support member, and an exposed portion of each elongated member is exposed through the aperture, further wherein each exposed portion has approximately the same length.

[c69] 69. The device of claim 62 wherein the connection structure includes at least one electrically conductive metallic material.

[c70] 70. The device of claim 62 wherein the bond site includes a solder ball pad, and wherein the apparatus further comprises a solder ball disposed on the solder ball pad.

[c71] 71. The device of claim 62 wherein at least one of the elongated members has a first end connected to the bond site and a second end spaced apart from the bond site, and wherein the elongated member includes an anchor toward the second end to secure the elongated member to the support member.

[c72] 72. The device of claim 62 wherein the support member has a first surface that includes the support surface, the support member further having a second surface facing opposite from the first surface, the connection structure being disposed on the second surface, and wherein the support member includes a slot extending between the first and second surfaces, and wherein the apparatus further comprises wires extending through the slot between the second connection structure and the microelectronic substrate.

[c73] 73. A microelectronic assembly, comprising:

a microelectronic substrate having a first surface, a second surface facing opposite from the first surface, and a first bond site positioned at least proximate to the second surface; and

a connection structure disposed on the second surface of the microelectronic substrate, the connection structure having a second bond site configured to receive a flowable conductive material, the connection structure further having at least two elongated members connected to and extending outwardly from the second bond site.

[c74] 74. The assembly of claim 73 wherein each elongated member is configured to receive at least a portion of the flowable conductive material from the second bond site.

[c75] 75. The assembly of claim 73 wherein at least one of the elongated members is electrically coupled to the first bond site of the microelectronic substrate.

[c76] 76. The assembly of claim 73 wherein none of the elongated members of the connection structure are connected to any bond sites of the microelectronic substrate.

[c77] 77. The assembly of claim 73, further comprising a volume of flowable conductive material disposed on the second bond site.

[c78] 78. The assembly of claim 73 wherein the connection structure includes a metal redistribution layer deposited on the microelectronic substrate.

[c79] 79. The assembly of claim 73 wherein the microelectronic substrate has a first surface and a second surface facing opposite from the first surface, and wherein the first bond site is positioned at least proximate to the second surface, further wherein the elongated members are spaced apart from the second surface in a plane generally parallel to the second surface.

[c80] 80. The assembly of claim 73 wherein the microelectronic substrate has a first surface and a second surface facing opposite from the first surface, and wherein the first bond site is positioned at least proximate to the second surface, and wherein the elongated members each have a first surface and a second surface facing opposite from the first surface, and wherein the assembly further comprises:

a first passivation layer between the second surface of the microelectronic substrate and the first surfaces of the elongated members;

a second passivation layer adjacent to the second surfaces of the elongated members; and

a conductive coupler disposed on the second bond site, the conductive coupler including a flowable conductive material.

[c81] 81. The assembly of claim 73 wherein the microelectronic substrate has a first surface and a second surface facing opposite from the first surface, and wherein the first bond site is positioned at least proximate to the second surface in a first plane generally parallel to the second surface, further wherein the second

bond site is positioned in a second plane generally parallel to and spaced apart from the first plane.

[c82] 82. An apparatus for supporting a microelectronic substrate, comprising:

a support member having a first surface and a second surface facing opposite from the first surface, the second surface being configured to carry a microelectronic substrate; and

a connection structure carried by the support member, the connection structure including:

first and second bond sites, the first bond site being positioned at least proximate to the first surface of the support member, the second bond site being positioned at least proximate to the second surface of the support member, the second bond site being configured to be electrically coupled to the microelectronic substrate when the support member carries the microelectronic substrate, the first bond site being configured to receive a flowable conductive material; and

at least two elongated members connected to and extending outwardly from the first bond site, at least one of the elongated members being coupled between the first and second bond sites.

[c83] 83. The apparatus of claim 82 wherein the at least one elongated member includes a first portion in a first plane generally parallel to the first surface, a second portion in a second plane generally parallel to the second surface and spaced apart from the first plane, and a third portion connected between the first and second portions.

[c84] 84. The apparatus of claim 82, further comprising a solder ball disposed on the first bond site.

[c85] 85. The apparatus of claim 82, further comprising:

a microelectronic substrate carried by the support member; and

a conductive link electrically coupled between the microelectronic substrate and the second bond site.

[c86] 86. The apparatus of claim 82, further comprising:

a microelectronic substrate carried by the support member; and

a wire bond electrically coupled between the microelectronic substrate and the second bond site.

[c87] 87. The apparatus of claim 82 wherein each elongated member is configured to receive at least a portion of a flowable material from the first bond site.

[c88] 88. A method for coupling a flowable conductive material to a microelectronic device, comprising:

aligning a support member to receive the flowable conductive material, the support member having a support surface configured to carry a microelectronic substrate, the support member further having a first connection structure and a second connection structure, the first connection structure being configured to remain decoupled from a microelectronic substrate when the support member carries the microelectronic substrate, the first connection structure having a first bond site configured to receive the flowable conductive material, the second connection structure having a second bond site configured to receive the flowable conductive material, the second connection structure being configured to be electrically coupled to the microelectronic substrate when the support member carries the microelectronic substrate;

disposing a first quantity of the flowable conductive material on the first bond site;

wicking a first portion of the first quantity of flowable conductive material along first elongated members connected to and extending outwardly from the first bond site;

disposing a second quantity of the flowable conductive material on the second bond site; and

wicking a second portion of the second quantity of flowable conductive material along second elongated members extending outwardly from the second bond site, with the second portion of the flowable conductive material having a volume approximately equal to a volume of the first portion.

[c89] 89. The method of claim 88 wherein wicking the first portion includes wicking the first portion along a first number of first elongated members, and wherein wicking the second portion includes wicking the second portion along a second number of second elongated members, with the first number equal to the second number.

[c90] 90. The method of claim 88, further comprising:

attaching a microelectronic substrate to the support member;

electrically coupling the microelectronic substrate to the second connection structure; and

testing the microelectronic substrate by contacting a test fixture with the flowable conductive material on the first and second connection structures.

[c91] 91. The method of claim 88, further comprising selecting the second connection structure to include a third bond site configured to be wire bonded to the microelectronic substrate when the microelectronic substrate is carried by the

support member, and wherein and at least one of the second elongated members extends between the second and third bond sites.

[c92] 92. The method of claim 88 wherein wicking the first portion of flowable conductive material includes wicking the first portion along two first elongated members extending away from opposite sides of the first bond site.

[c93] 93. The method of claim 88, further comprising:

disposing a layer on the support member and on the first and second elongated members; and

aligning a first aperture of the layer with the first bond site and aligning a second aperture of the layer with the second bond site.

[c94] 94. The method of claim 88, further comprising disposing a layer on the support member and over the first and second elongated members with a first aperture of the layer aligned with the first bond site and a second aperture of the layer aligned with the second bond site, further wherein a covered portion of each first and second elongated member extends between the layer and the support member, and an exposed portion of each elongated member is exposed through one of the first and second apertures, still further wherein each exposed portion has approximately the same length.

[c95] 95. The method of claim 88 wherein the first bond site includes a solder pad having a diameter of about 330 microns and wherein at least one of the first elongated members has a length of about 250 microns, and wherein the method further comprises disposing a solder mask over the first and second elongated members with a first aperture of the solder mask aligned with the first bond site and a second aperture aligned with the second bond site, and with a covered portion of the at least one first elongated member extending beneath the solder mask for a distance of about 200 microns.

[c96] 96. The method of claim 88, further comprising selecting the first connection structure to include at least one electrically conductive metallic material.

[c97] 97. The method of claim 88, further comprising selecting one of the first elongated members to be shorter than another of the elongated members.

[c98] 98. The method of claim 88, further comprising:

temporarily coupling at least one of the first elongated members to a plating bus;

applying electrical current to the plating bus to plate the first connection structure; and

decoupling the first elongated members from the plating bus.

[c99] 99. The method of claim 88, further comprising:

attaching a microelectronic substrate to the support member; and

electrically coupling the microelectronic substrate to the second connection structure.

[c100] 100. The method of claim 88, further comprising selecting the first connection structure to have two elongated members.

[c101] 101. The method of claim 88, further comprising selecting the first connection structure to have three elongated members.

[c102] 102. The method of claim 88, further comprising anchoring an end of at least one of the elongated members to the support member.

[c103] 103. The method of claim 88, wherein each of the first and second elongated members has an axis along which the member is elongated and

wherein the method further includes selecting each elongated member to have an approximately equal width transverse to the axis.

[c104] 104. The method of claim 88, further comprising:

attaching a microelectronic substrate to the support surface of the support member; and

connecting the microelectronic substrate to the second connection structure by passing a wire from the microelectronic substrate through an aperture in the support surface and to the second connection structure.

[c105] 105. The method of claim 88 wherein disposing the first quantity of flowable conductive material includes forming a first solder ball projecting away from the first bond site by a first distance, and wherein disposing the second quantity of flowable conductive material includes forming a second solder ball projecting away from the second bond site by a second distance at least approximately equal to the first distance.

[c106] 106. A method for coupling a flowable conductive material to a microelectronic device, comprising:

aligning a support member to receive a flowable conductive material, the support member having a support surface configured to carry a microelectronic substrate, the support member further having a first connection structure and a second connection structure, the first connection structure being configured to remain decoupled from a microelectronic substrate when the support member carries the microelectronic substrate, the first connection structure having a first bond site configured to receive the flowable conductive material, the second connection structure having a second bond site configured to receive the flowable conductive material and be electrically

coupled to the microelectronic substrate when the support member carries the microelectronic substrate;

disposing a first quantity of the flowable conductive material on the first bond site to form a first conductive coupler;

wicking a first portion of the first quantity of flowable conductive material along first elongated members connected to and extending outwardly from the first bond site such that the first conductive coupler projects away from the first bond site in an at least approximately normal direction by a first distance;

disposing a second quantity of the flowable conductive material on the second bond site to form a second conductive coupler; and

wicking a second portion of the second quantity of flowable conductive material along second elongated members extending outwardly from the second bond site such that the second conductive coupler projects away from the second bond site in an at least approximately normal direction by a second distance at least approximately equal to the first distance.

[c107] 107. The method of claim 106 wherein wicking the second portion includes wicking a second portion having a volume at least approximately equal to a volume of the first portion.

[c108] 108. The method of claim 106 wherein wicking the first portion includes wicking the first portion along a first number of first elongated members, and wherein wicking the second portion includes wicking the second portion along a second number of second elongated members, with the first number equal to the second number.

[c109] 109. The method of claim 106 wherein wicking the first portion of flowable conductive material includes wicking the first portion along two first elongated members extending away from opposite sides of the first bond site.

[c110] 110. The method of claim 106, further comprising disposing a layer on the support member and over the first and second elongated members with a first aperture of the layer aligned with the first bond site and a second aperture of the layer aligned with the second bond site, further wherein a covered portion of each first and second elongated member extends between the layer and the support member, and an exposed portion of each elongated member is exposed through one of the first and second apertures, still further wherein each exposed portion has approximately the same length.

[c111] 111. The method of claim 106, further comprising:

attaching a microelectronic substrate to the support member; and

electrically coupling the microelectronic substrate to the second connection structure.

[c112] 112. A method for supporting a microelectronic substrate, comprising:

attaching the microelectronic substrate to a support member having a connection structure with a bond site configured to receive a flowable conductive material, the connection structure further having at least two elongated members connected to and extending outwardly from the bond site, each elongated member being configured to receive at least a portion of the flowable conductive material from the bond site; and

electrically coupling the microelectronic substrate to the support member without electrically coupling the microelectronic substrate to any of the elongated members of the connection structure.

[c113] 113. The method of claim 112 wherein the connection structure is a first connection structure and the elongated members are first elongated members, and wherein electrically coupling the microelectronic substrate to the support member includes electrically coupling the microelectronic substrate to a second connection structure carried by the support member, the second connection structure having a second bond site configured to receive a flowable conductive material, the second connection structure having second elongated members extending outwardly from the second bond site, wherein each of the second elongated members is configured to receive at least a portion of the flowable conductive material from the second bond site.

[c114] 114. The method of claim 112 wherein the connection structure is a first connection structure, the bond site is a first bond site and the elongated members are first elongated members configured to receive at least a portion of a flowable conductive material from the first bond site, and wherein the support member includes a second connection structure, the second connection structure having a second bond site. configured to receive at least a portion of the flowable conductive material, and wherein the method further comprises:

disposing a first quantity of the flowable conductive material on the first bond site;

wicking a first portion of the first quantity of flowable conductive material along the first elongated members;

disposing a second quantity of the flowable conductive material on the second bond site; and

wicking a second portion of the second quantity of flowable conductive material along second elongated members extending outwardly from the second bond site, with the second portion of the flowable conductive material having a volume approximately equal to a volume of the first portion.

[c115] 115. The method of claim 112 wherein the connection structure is a first connection structure, the bond site is a first bond site and the elongated members are first elongated members configured to receive at least a portion of a flowable conductive material from the first bond site, and wherein the support member includes a second connection structure, the second connection structure having a second bond site configured to receive at least a portion of the flowable conductive material, and wherein the method further comprises:

disposing a first quantity of the flowable conductive material on the first bond site;

wicking a first portion of the first quantity of flowable conductive material along the first elongated members;

disposing a second quantity of the flowable conductive material on the second bond site; and

wicking a second portion of the second quantity of flowable conductive material along second elongated members extending outwardly from the second bond site, with the second elongated members being equal in number to the first elongated members.

[c115] 115. A method for coupling a flowable conductive material to a microelectronic substrate, comprising:

providing a microelectronic substrate having a first surface, a second surface facing opposite from the first surface, and a first bond site positioned at least proximate to the second surface;

disposing a connection structure on the second surface of the microelectronic substrate, the connection structure having a second bond site configured to receive a flowable conductive material, the connection structure further having at least two elongated members connected to and extending outwardly from the second bond site; and

disposing a flowable conductive material on the second bond site to form a conductive coupler at the second bond site.

[c116] 116. The method of claim 115 wherein each elongated member is configured to receive at least a portion of the flowable conductive material from the second bond site, and wherein the method further comprises wicking at least a portion of the flowable conductive material along each elongated member.

[c117] 117. The method of claim 115, further comprising electrically coupling at least one of the elongated members to the first bond site of the microelectronic substrate.

[c118] 118. The method of claim 115, further comprising electrically coupling the microelectronic substrate to the connection structure without electrically coupling any of the elongated members extending from the second bond site of the connection structure to any bond sites of the microelectronic substrate.

[c119] 119. The method of claim 115 wherein disposing the connection structure on the microelectronic substrate includes depositing a metal redistribution layer on the microelectronic substrate.

[c120] 120. The method of claim 115 wherein the elongated members each have a first surface and a second surface facing opposite from the first surface, and wherein the method further comprises:

disposing a first passivation layer between the second surface of the microelectronic substrate and the first surfaces of the elongated members; and

disposing a second passivation layer adjacent to the second surfaces of the elongated members.

[c121] 121. A method for supporting a microelectronic substrate, comprising:

attaching the microelectronic substrate to a support member having a first surface and a second surface facing opposite from the first surface, the support member further having a connection structure that includes first and second bond sites, the first bond site being positioned at least proximate to the first surface of the support member, the second bond site being positioned at least proximate to the second surface of the support member, the connection structure further including at least two elongated members connected to and extending outwardly from the first bond site, at least one of the elongated members being coupled between the first and second bond sites;

electrically coupling the second bond site to the microelectronic substrate; and

disposing a flowable conductive material on the first bond site.

[c122] 122. The method of claim 121 wherein electrically coupling the second bond site to the microelectronic substrate includes connecting a wire bond between the second bond site and the microelectronic substrate.

[c123] 123. The method of claim 121 wherein each elongated member is configured to receive at least a portion of a flowable material from the first bond site, and wherein the method further includes wicking at least a portion of the flowable material along each elongated member.